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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,713

07/06/2004

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25944 7590 01/30/2007
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EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT

PAPER NUMBER

1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/500,713

Applicant(s)

MEERMAN ET AL.

Examiner

Jeff Wollschlager

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims and the replacement drawings filed November 22, 2006 have been entered. The objection to the drawings is withdrawn. Claims 1, 2 and 7 are currently amended. Claims 1-7 are pending.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 5,945,054 in view of Roberts (U.S. Patent 4,193,962; issued March 18, 1980).

Claim 9 of U.S. Patent 5,945,054 claims a method for manufacturing filaments from an optically anisotropic spinning solution comprising extruding the spinning

solution through a spinneret comprising a spinning field with a plurality of spinning orifices into a coagulation bath through a slot/rectangular opening in the bottom of the bath, wherein the edges of the rectangular opening are formed by plates with upper sides and lower sides, wherein the upper sides of the plates have the shortest distance to the spinning field, wherein a projection of the slot intrinsically is about the same size as a projection of the spinning field, and wherein a plane of an upper side of one plate intrinsically has a shorter distance to the center of the spinning field than a plane of an upper side of the other of the plate. Meerman et al. do not teach that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through the center of the spinning field has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates.

However, Roberts teaches an analogous method of spinning wherein for the purpose of reducing vortexing, fused filaments, and spin breaks, he provides an upward shift in the guides/plates so that adjacent edges of adjacent openings are at different levels, like claim 9 of the '054 patent, and further provides a lateral shift of the guides/plates such that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through center of the slot has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates (Figure 1; Figure 2 and 4, elements (18, 19, 20, 21, and 22); Abstract; col. 4, lines 5-7; col. 5, lines 1-4 and 30-44).

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Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to combine the teaching of Meerman et al. and Roberts for the purpose, as taught by both Meerman et al. (col. 3, lines 7-17) and Roberts (col. 1, lines 17-32), to reduce vortexing, fused filaments and spin breaks.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation requiring that the projection of the slot be limited to a vertical projection of the slot does not appear to be supported by the instant disclosure. This rejection can be overcome by pointing to the line(s) in the instant disclosure where support for this new limitation may be found.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 2 is indefinite because the limiting effect of the recitation, "and a line has a smaller distance to an edge of another plate than to an edge of the one plate" remains unclear. It is unclear what line is being referred to and what the limiting effect of the line is on the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meerman et al. (U.S. Patent 5,945,054; issued August 31, 1999) in view of Roberts. (U.S. Patent 4,193,962; issued March 18, 1980).

Regarding claims 1 and 2, Meerman et al. teach a method and a device for manufacturing filaments from an optically anisotropic spinning solution comprising extruding the spinning solution through a spinneret comprising a spinning field with a plurality of spinning orifices into a coagulation bath through a slot, wherein the edges of the slot are formed by plates with upper sides and lower sides, wherein the upper sides of the plates have the shortest distance to the spinning field, wherein a projection of the slot intrinsically is about the same size as a projection of the spinning field, and wherein a plane of an upper side of one plate has a shorter distance to the center of the spinning field than a plane of an upper side of the other of the plate (Abstract; col. 3, lines 13-18; col. 5, lines 3-9; claim 9). Meerman et al. do not teach that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through the center of the spinning field has a smaller distance to the edge of the other of the plates than to an edge of the one of the plates.

However, Roberts teaches an analogous method and device for spinning wherein for the purpose of reducing vortexing, fused filaments, and spin breaks, he provides an upward shift in the guides/plates so that adjacent edges of adjacent openings are at different levels, like Meerman et al., and further provides a lateral shift of the guides/plates such that a line through the center of the spinning field and perpendicular to the upper sides of the plates is located at a distance (d) from a parallel line through the center of the slot, wherein the line through center of the slot has a smaller distance to the edge of the other of the plates than to an edge of the one of the

plates (Figure 1; Figure 2 and 4, elements (18, 19, 20, 21, and 22); Abstract; col. 4, lines 5-7; col. 5, lines 1-4 and 30-44).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to combine the teaching of Meerman et al. and Roberts for the purpose, as taught by both Meerman et al. (col. 3, lines 7-17) and Roberts (col. 1, lines 17-32), to reduce vortexing, fused filaments and spin breaks.

As to claims 3-6, Meerman et al. exemplify a coagulation bath having a depth of 10 mm and openings/slots of 2 mm x 15 mm (col. 5, lines 3-7). Meerman et al. do not explicitly teach the claimed dimensions. However, it is noted that based on the size of the equipment employed by Meerman et al. and Roberts the dimensions implied by Meerman et al. and Roberts, are implicitly within the claimed ranges.

Further, it is noted that the thickness of the plates and the dimension of the distance (d) would impact the required size of the bath, the physical properties of the spun product and the spinning rate. Further, the thickness of the plates would impact the cost and weight of the plates and the amount of coagulating/quenching fluid to which the spun solution is exposed. As such, the thickness of the plates and the dimension of the distance (d) are result effective variables that would have been readily optimized as is routinely practiced in the art.

As to claim 7, the vertical projection of the slots have a greater length than the projection of the spinning field and are somewhat narrower in width (Figure 2 and Figure 4).

Response to Arguments

Applicant's arguments filed November 22, 2006 have been fully considered but they are not persuasive.

Applicant's arguments appear to be on the following grounds:

1. There is no motivation to combine Meerman et al. and Roberts because they employ different spinning techniques.

2. In Roberts, the material is guided from bar 18, via bars 19-22, to the outlet 44. The yarn is thus not guided through the holes between the bars, but over the bars to outlet aperture 44.

Applicant's arguments are not persuasive for the following reasons:

1. Meerman et al. and Roberts are directed to methods of spinning filaments and both are interested in reducing vortexing, fused filaments, and spin breaks as indicated in the rejection above. As such, they are analogous methods and one having ordinary skill would have been motivated to combine their teachings since they deal with the same problem solving area.

2. The examiner has a different interpretation of the teachings of Roberts. For example, the examiner points to Figure 2, element (23) and notes that the yarn guides (23) are not aligned with each other but are staggered. As such, it is the examiner's position that the filaments are fed through the holes in the bars to be guided through the guides (23) and then to come through the aperture (44) in alignment. The examiner further notes that Roberts discloses that the "filaments are arranged" (col. 2 line 35) and that the partitions are moveable to "facilitate separation of the filaments at the

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commencement of spinning" (col. 2, lines 49-52) and that "each bundle of filaments passes around the appropriate guide (23), after which the bundles are withdrawn from said portion through the outlet aperture (44)" (col. 4, lines 59-67). The examiner further notes that Roberts discloses, "enabling the operator to separate the filaments into their correct bundles and locate these around the appropriate guides (23)" (col. 5, lines 38-41) and that the filaments "pass around the yarn guides and then upwards" (Abstract, emphasis added). As such, the examiner maintains the current interpretation of the Roberts reference.

Conclusion

All claims are rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

January 23, 2007


CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

1/23/07